

REMARKS

This amendment is responsive to the Office Action dated August 12, 2002. Claims 1, 5 and 20 have been amended. Claims 46 and 47 have been added.

Claims 1-3, 5-6, 11-12, 20-21 and 46-47 are pending in this application. The title of the invention and the abstract of the disclosure are objected to. Claims 20 and 21 are objected to because they depend from non-elected claims 18 and 19. Claims 1-3, 5-6, 11-12, and 20-21 are rejected to under 35 U.S.C. 112 second paragraph. Claims 1-3, 6 and 11 are rejected under 35 U.S.C. 102(b). Claims 3, 5, 20-21 are rejected under 35 U.S.C. 103(a).

I. TITLE

The title of the invention is objected to as not descriptive. A corresponding amendment has been made to the title.

II. ABSTRACT

The abstract of the disclosure is objected to as being too long citing MPEP § 608.01(b). A corresponding amendment has been made to the abstract.

III. CLAIM OBJECTIONS

Claims 20-21 are objected to because they depend on non-elected claims 18-19. New claims 46 and 47 have added that are identical to old claims 18 and 19 to correct this problem.

IV. CLAIM REJECTIONS UNDER 35 U.S.C. 112.

Claims 1-3, 5-6, 11-12, and 20-21 are rejected 35 U.S.C. 112, second paragraph as indefinite.

Examiner states the it is not clear whether "micorcircuit" (claim 1, line 4) is the same as "a microcircuit layer" as represented in the preamble; and is the "plastic encapsulated microcircuit," (claim 1 line 3) is the same as one claimed in line 6. Applicant respectfully traverses this rejection.

The preamble does not recite "a microcircuit layer," but rather "a stackable microcircuit layer." The selected nomenclature for "a microcircuit," "a plastic encapsulated microcircuit," and "a stackable microcircuit layer," are defined in the specification and drawings. In the specification, page 12, line 9, a microcircuit is defined as member 210, see Fig. 4a, "having and active surface 211 containing integrated circuitry and a bond pad." Likewise in the specification page 12 line 8, members 400*and 300 are defined as a "stackable microcircuit layer," and a "PEM," respectively. Figures 4a and 4f illustrate a "PEM" 300 and a "stackable microcircuit layer" 400*, respectively. Applicants respectfully submits that the selected nomenclature and the corresponding claims are clear and definite when construed in light of the complete patent document.

The Office Action states that the scope of claims 1-3, 5-6, 11-12, and 20-21 is not clear, because the method contains structure limitations of the microcircuit, "i.e. having an active surface." Ex parte Drammers, 155 U.S.P.Q. (BNA) 284 (Bd. App. 1961) points out that structural apparatus limitations are not per se objectionable, and, to the extent necessary to carry out the claimed

method, are permissible in a method claim. Therefore, Applicants respectfully submit that these claims are in proper form and their claim scope clearly defined.

The Office Action states that the term "that" in claim 1, line 3 is unclear. Applicants have amended claim 1 by deleting "that includes," and replacing with "the PEM including," to insert claim language that is more clear.

The Office Action states that it is not clear what applicants are referring as "modifying," in claim 1, line 7, and it is unclear what is involved in the modifying step. Applicants have replaced "modifying the PEM" with "removing at least part of the encapsulant," to clarify the action performed in this step.

III. REJECTIONS UNDER 35 U.S.C. 102

Claims 1-3, 6 and 11 as best understood are rejected under 35. U.S.C. 102(b) as being anticipated by Conru et al. (US 5,086,018). In the first claim, Applicants have clarified the "modifying" step to also further distinguish the claimed invention from the prior art. Additionally, claim 1 was amended to further distinguish "an encapsulant."

The Office Action cites Conru et al. as disclosing substantially every method limitation wherein a microcircuit 52 having an encapsulant 56 is modified "as described in figure 5, that shows the modifying step wherein at least one conductive member 51 is exposed." The structure disclosed by Conru et al., in contrast to the present invention, is "insulating material" 56 or "regions 56 where wires pass over to connect lead frame conductors to the respective chip pads."

(col. 5, lines 1-3). This structure is essentially insulative islands used to safely pass conductive wires over another lead.

By contrast, claim 1 as amended, is directed to taking "an encapsulant in contact with and encasing the microcircuit," and "removing at least part of the encapsulant." The insulative regions of Conru et al. are different from the encapsulants of the present invention. And, in no manner does Conru et al. disclose or suggest the step of removing at least part of the insulative regions. Applicants respectfully requests that this rejection be withdrawn.

Claims 2-3, 6 and 11 have also been rejected as being anticipated by Conru et al. Applicants assert that independent claim 1, as amended, is in a patentable condition. Claims 2-3, 6 and 11 all depend from claim 1 and therefore contain all its limitations. For this reason Applicants assert that claims 2-3, 6 and 11 are likewise patentable.

V. CLAIM REJECTIONS UNDER 35 U.S.C. 103

Claims 3, 5, 20, and 21 are rejected under 35 U.S.C. 103(a) as obvious over Conru et al. and other references. Applicants assert that independent claim 1, as amended, is in a patentable condition. Claims 3, 5, 20 and 21 are dependent claims, and contain all limitations of claims from which they depend including claim 1. For this reason Applicants assert that claims 3, 5, 20 and 21 are likewise patentable.

VI. SUMMARY

Based on the above amendments and accompanying remarks, Applicants respectfully submit that all pending claims are in condition for allowance and earnestly solicits a notice thereof. Applicant encourages the Examiner to telephone the undersigned attorney if it appears that a telephone conference would facilitate allowance of the application.

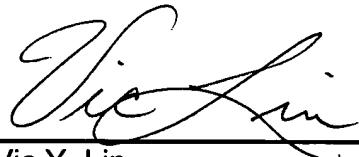
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Signature
January 13, 2003

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Version With Markings To Show Changes Made

In the Claims:

The claims have been amended as follows:

- 1 1. (Amended) A method of making a stackable microcircuit layer
2 comprising the steps of:
3 providing a plastic encapsulated microcircuit (PEM), [that includes] the
4 PEM including
 - 5 (a) a microcircuit having an active surface containing integrated
6 circuitry and a bond pad, and *new*
7 (b) an encapsulant in contact with [and encasing] the microcircuit;
8 and *new*
9 [modifying the PEM] removing at least part of the encapsulant to produce
10 a modified PEM having a modified surface on which modified surface is exposed
11 a conductive member that is electrically connected to the bond pad.
- 1 5. (Amended) The method of Claim 2 wherein the [modifying] removing
2 step is accomplished through grinding.
- 1 20. (Amended) The method of Claim [19] 47 wherein the PEM comprises
2 a thin small outline package (TSOP) containing a gold ball bond, a lead frame,
3 and a wire that are collectively encapsulated in the plastic body of the PEM,
4 wherein the gold ball bond is formed on the bond pad, wherein the wire connects
5 the gold ball bond to the lead frame, and wherein the gold ball bond is the

- 6 conductive member exposed on the modified surface of the modified PEM
- 7 through thinning.